

ABSTRACT OF THE DISCLOSURE

A general method and apparatus for treating materials at high speed comprises the steps of dissolving a relatively high concentration ozone gas in a solvent at a relatively low predetermined temperature T_1 to form an ozone-solvent solution with a relatively high dissolved ozone concentration, and heating either the ozone-water solution or the material to be treated or both, the ozone-solvent solution and the material to be oxidized with a point-of-use heater to quickly increase the temperature to a predetermined higher temperature $T_2 > T_1$, and applying the ozone-solvent solution to said material(s) whereby the heated ozone-water solution will have a much higher dissolved ozone concentration at said higher temperature, than could be achieved if the ozone gas was initially dissolved in water at said higher temperature.